

9 remote method, said stub used to facilitate remote invocation of said remote
10 method; and

- 11 ii. a stub code loader module configured to control said computer to, when said
12 stub code is received in response to said stub code retrieval module, load said
13 stub code into said execution environment, thereby to make the stub code
14 available for use in said remote invocation of said remote method.

REMARKS

Claims 1-33 are pending in the application. Applicants have amended claims 1, 11, 21, and 31-33 to better clarify the distinctions between applicants' invention and the cited prior art. Additionally, applicants have amended all of the claims to more particularly point out and distinctly claim the subject matter of applicants' invention.

In the Office Action, the Examiner rejected all of the pending claims in four groups. First, she rejected claims 1, 4, 11, 14, 21, and 24 under 35 U.S.C. § 102(e) as being anticipated by Hill et al. (U.S. Patent No. 5,511,197). Second, she rejected claims 31-33 under 35 U.S.C. § 103(a) as being unpatentable over Betz, "Interoperable Objects: Laying the Foundation for Distributed-Object Computing" in view of the Hill patent. Third, she rejected claims 3, 7-10, 13, 17-20, 23, and 27-30 under 35 U.S.C. § 103(a) as being unpatentable over the Hill patent in view of Birrell et al., "Network Objects," and lastly, she rejected claims 2, 5, 6, 12, 15, 16, 22, 25, and 26 under 35 U.S.C. § 103(a) as being unpatentable over the Hill patent in view of Mitchell et al., "An Overview of the Spring System." Applicants respectfully traverse these rejections.

Concerning the § 102(e) rejection of claims 1, 4, 11, 14, 21, and 24 using the Hill patent, these claims are patentable over the Hill patent, because the Hill patent does not teach retrieving a stub code from a server associated with a remote method to be invoked, which is recited by each of these claims. For example, claim 1 recites a stub code retrieval subsystem including a stub code retriever configured to initiate the retrieval of stub code from a server associated with the processing of a remote method. The stub code is used to facilitate the remote invocation of the remote method. Furthermore, the stub code retrieval subsystem includes a stub code loader configured to load the stub code into an execution environment when the stub code is received by the stub code retriever to make the stub code available for use in the remote invocation of the remote method. Thus, this claim recites that stub code is retrieved from the server associated with the remote method to facilitate the remote invocation of the remote method. This feature is not taught by the Hill patent.

Instead, the Hill patent describes marshaling an interface pointer from a server object in a server process to a client process. To do so, the server process creates a stub object on the server computer and then sends an identifier of the stub object to the client process. When the client process receives the stub identifier, it instantiates a proxy object that both receives requests from the client process to invoke a function member of the server object and sends the requests to the identified stub (Abstract). The proxy, in this sense, serves as a stub. To create the proxy, the client process loads a locally stored dynamic link library and invokes the library's GetClassFactory function (column 8, lines 35-55). As a result, the Hill system does not retrieve stub code from the server, as recited by claims 1, 4, 11, 14, 21, and

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24; instead, it creates its "proxy" from a dynamic link library on the local system. Accordingly, claims 1, 4, 11, 14, 21, and 24 are patentable over the Hill patent.

In her second rejection, the Examiner rejected claims 31-33 under 35 U.S.C. § 103(a) as being unpatentable over the Betz reference in view of the Hill patent. This rejection, however, suffers from the same problem as the previous rejection in that the cited references fail to teach or suggest retrieving stub code from a server associated with the remote method to be invoked, which is recited by claims 31-33.

Taking claim 33 as being exemplary, this claim recites a system comprising a stub code retrieval module and a stub code loader module. The stub code retrieval module is configured to control a computer to initiate a retrieval of stub code from a server associated with the processing of the remote method. The stub code is used to facilitate remote invocation of the remote method. The stub code loader module is configured to control the computer to load the stub code into the execution environment when the stub code is received in response to the stub code retriever module to make the stub code available for use in the remote invocation of the remote method. Thus, this claim recites retrieving stub code from the server associated with the remote method to facilitate the remote invocation of this method.

The Betz reference describes a number of distributed object computing systems. However, as admitted by the Examiner, the Betz reference does not teach retrieving a stub from a server associated with the processing of a remote method (Office Action, May 25, 1999, at page 4). Moreover, the Hill patent, as described above, also does not provide such a teaching or suggestion. Accordingly, no reasonable combination of the Betz reference and

the Hill patent teaches or suggests retrieving stub code from a server as recited by claims 31-33, thus rendering these claims patentable over the cited references.

In her third rejection, the Examiner rejected claims 3, 7-10, 13, 17-20, 23, and 27-30 under 35 U.S.C. § 103 as being unpatentable over the Hill patent in view of the Birrell reference. All of the claims in this group are dependent claims that depend from independent claims previously discussed. Thus, these claims are patentable because of their dependence on allowable independent claims. Applicants note that although the Examiner additionally indicates that claim 1 is rejected in this group, there is no analysis for claim 1. Applicants therefore conclude that the inclusion of claim 1 in this group is a typographical error.

Lastly, the Examiner rejected claims 2, 5, 6, 12, 15, 16, 22, 25, and 26 under 35 U.S.C. § 103 as being unpatentable over the Hill patent in view of the Mitchell reference. All of these claims are dependent claims that depend on independent claims previously discussed. Thus, these claims are patentable because of their dependence on allowable independent claims.

Based on the above amendments and remarks, applicants respectfully request reconsideration of the application and timely allowance of the pending claims. Additionally, applicants respectfully request that the Examiner call applicants' attorney if it would expedite prosecution.

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Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

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Dated: November 24, 1999

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